REMARKS

Upon entry of this amendment, independent claim 1 with dependent claims 2-9 and 12-19, independent claim 10, and independent claim 11 will be present in the application.

Claims 1, 10 and 11 have been amended to more clearly recite that the subject method is a method for controlling operation of a flotation cell receiving a pulp suspension having impurities and discharging a pulp suspension accept and a foam having the impurities. Such method disclosed on page 4, lines 10-16. Accordingly, the amendment does not introduce any new matter

Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. 3,551,897 (Cooper). Claim 11 was rejected under 35 U.S.C. § 102(b) as being anticipated by CA 1015869. Both the Cooper reference and the '869 reference relate to ore flotation, where the accept (ore concentrate) is in the foam and the reject (tailings) are left in suspension. In the subject invention, the accept is a pulp suspension and the reject is the foam, which contains ink particles and stickies. Claims 1, 10 and 11 have been amended to recite that the subject method controls operation of a flotation cell receiving a pulp suspension having impurities and discharging a pulp suspension accept and a foam having the impurities.

The Office Action cites tailings sensor 37 of the Cooper reference and tailings sensor 28 of the '869 reference as measuring a quality parameter of the accept. However, this is patently false since the tailings of both these apparatus/methods is the reject and not the accept.

Further with respect to the Cooper reference, the **thickness** of the froth layer (cited in the Office Action), measured by device 34, is a quantity parameter not a quality characteristic as required by claims 1, 10 and 11. While it may be argued that the analyzing instruments 35, 36 and 37 of the Cooper reference measure a quality parameter, Cooper teaches that "signals from [all of the described] sensing devices 30 to 38 are sent to a data acquisition and control system 11". Col. 4, lines 20-21. Cooper further teaches that the data received from the sensing devices 30 to 38 "is then applied to a mathematical model of the process". Col. 4, lines 38-39. This model and data are used to calculate new operating points for the plant to produce a maximum profit. The plant control variables are

then adjusted to accordingly. Col. 4, lines 39-52. It cannot be determined what effect of any one of the data streams transmitted by instruments 35-37 will ultimately have on the operation of any component of the Cooper apparatus after this data is combined with the quantitative data transmitted by other sensors, processed by the model, and then used to theoretically project the most profitable way of operating the plant as a whole. Accordingly, a system in accordance with the Cooper method would not set a value for the cell foam level based on the measured value of the at least one quality characteristic, as required by claims 1, 10 and 11.

Claims 1, 2 and 6-11 were rejected under 35 U.S.C. § 102(b) as being anticipated by DE 4429277. Claims 3-5 and 12-19 were rejected under 35 U.S.C. § 103(a) as being obvious over DE '277 in view of U.S. 5,062,964 (Ortner).

The Office Action alleges that DE '277 "discloses a deinking flotation cell 10 which includes measuring the froth and pulp levels, measuring a quality of the accept fraction at 28 and controlling, among other things, the froth and the pulp level in response to the accept measurements." The Applicants respectfully submit that DE '277 does not disclose each and every element recited in any of claims 1, 10 or 11, and therefore the rejection must be withdrawn.

Claims 1, 10 and 11 each require that the flotation cell include both a "liquid level controller measuring and controlling the cell liquid level and a foam level controller measuring and controlling the cell foam level". DE '277 discloses only a single controller. Claim 1 also requires that the method include "setting a value for the cell foam level within the foam level controller, the value of the cell foam level being determined by the measured value of the at least one quality characteristic. Claim 11 also requires "setting a value for the cell foam level within the foam level controller or setting a value for the cell liquid level within the liquid level controller, the value of the level being determined by the measured value of the at least one quality characteristic." There is simply nothing in DE '277 that suggests that this should be done. Claim 10 also requires "setting a value for the cell foam level within the foam level controller, the value of the cell foam level being determined by the measured value of the at least one quality characteristic; and setting a value for the cell liquid level within the liquid level controller, the value of the cell liquid level be determined by the measured value of the at least one quality characteristic." Since DE

'277 discloses only a single controller, it cannot possibly disclose setting values in two separate controllers.

The various dependent claims add additional features to the independent claims, and are therefore believed to be allowable. Also, the dependent claims are believed patentably distinct on their own merits as being directed to combinations not suggested by the references. For example, claim 2 recites that "the quality characteristic is selected from brightness, whiteness, color type, number of dirt specks and number of stickies in the accept." None of the references cited in the Office Action disclose using the quality characteristics listed in claim 2. With regard to claims 3-5 and 12-19, even if one were to modify the floatation cell of DE '277 to include multiple sub-cells, it cannot logically be argued that it would have been obvious to measure the foam level in each of the sub-cells (claim 4) while it would also have been obvious to measure the foam level in only one sub-cell or only in one part of the sub-cells (claim 5). The same logical incongruity exists for the rejection of claims 12-19.

In view of the above-directed amendments and the proceeding remarks, prompt and favorable reconsideration is respectfully requested.

Respectfully submitted,
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